

Claims:

1 Apparatus for sealing an envelope, having a body and a flap with a crease line therebetween, comprising:

5 (a) first transport means (31a) for advancing the envelope with the flap in an open position in a transport direction along a transport path, said transport means being arranged for applying drive to the envelope at a first location;

10 (b) means for determining the position of the crease line along the transport path;

15 (c) envelope buckling means (31b, 53) operative in response to the crease line reaching a predetermined position, to engage the envelope from opposite sides at a second location, spaced from the first location, and cause the envelope to buckle in a direction laterally of the transport path, thereby partially closing the flap to the envelope body, and

(d) sealing means (31a, 31b) located adjacent the transport path for receiving the buckling envelope with its crease line leading, for completing the closing of the flap to the body of the envelope.

20 2. Apparatus according to claim 1, wherein the envelope buckling means (31b, 53) is arranged to be in driving engagement with opposite faces of the envelope, so as to apply drive to the envelope in a direction generally opposite to the transport direction of the first transport means (31a).

25 3. Apparatus according to claim 2, wherein the sealing means (31a, 31b) are arranged to close the envelope by applying pressure to the flap and body of the envelope from opposite sides.

30 4. Apparatus according to any one of claims 3, wherein the first transport means (31a) are formed by a first roller paid (31a).

5. Apparatus according to any one of claims 4, wherein the envelope buckling means (31b, 53) are formed by a second roller pair (31b, 53), one roller (31b) of which is a drive roller and the other of which is a driven roller (53),
5 arranged to be brought into and out of driving contact with the envelope.

6. Apparatus according to claim 5, wherein the driven roller (53) of the second roller pair (31b, 53) is carried by a movable inducer (50), the driven roller (53) being arranged to be brought into and out of driving contact with the
10 envelope by movement of the inducer (50).

7. Apparatus according to claim 6, wherein the inducer (50) is pivotably mounted on a rotation axis (54).

15 8. Apparatus according to claim 7, wherein the inducer (50) comprises a curved guide portion (51), at the free end of which a protrusion (52) is located for urging the crease line of the envelope into a sealing means (31a, 31b).

9. Apparatus according to any one of claims 8, wherein the sealing means
20 (31a, 31b) comprises a sealing roller pair (31a, 31b) whose nip is arranged to receive the partially closed envelope with its crease line leading.

10. Apparatus according to claim 9, wherein a drive roller (31a) of the first transport means (31a) and the drive roller (31b) of the envelope buckling means
25 (31b, 53) together form the sealing roller pair (31a, 31b) for sealing the envelope.

30 11. A method for sealing an envelope having a body and a flap with a crease line therebetween, comprising:
(a) transporting the envelope with its flap in an open position in a first direction along a transport path by applying drive to the envelope at a first location;

(b) engaging the envelope from opposite sides at a second location spaced from the first location, when the crease line reaches a predetermined position, thereby causing the envelope to buckle in a direction laterally of the transport path to partially close the flap to the envelope body;

5 (c) applying pressure to the buckling envelope with its crease line leading at a location adjacent to the transport path, to complete the closing of the flap to the body of the envelope.

12. A method according to claim 11, wherein step (b) comprises applying
10 drive to the envelope in generally the opposite direction to the first direction.

13. A method according to claim 12 further comprising inducing the envelope to buckle in the lateral direction by applying a force on the envelope between
15 said first and second locations.

14. A method according to claim 13, wherein the envelope is advanced along the transport path with its open flap trailing.

15. A method according to claim 14, further comprising:
20 maintaining drive to the envelope at said first location while engaging the envelope from opposite sides at the second location.

16. Apparatus for closing an envelope, having a body and a flap with a crease line therebetween, comprising:

25 (a) first transport means for advancing the envelope with the flap in an open position in a transport direction along a transport path, said transport means being arranged for applying drive to the envelope at a first location;

(b) means for determining the position of the crease line along the transport path;

30 (c) envelope buckling means operative in response to the crease line reaching a predetermined position, to engage the envelope from opposite sides

at a second location, and cause the envelope to buckle in a direction laterally of the transport path, thereby partially closing the flap to the envelope body; and

- (d) closing means located adjacent the transport path for receiving the buckling envelope with its crease line leading, for completing the closing of the flap to the body of the envelope.